

Claims 1, 2, 4-7, 9-11, 13-15, 17-19, 21-23, 25 and 26 are now pending in this application, with Claims 1, 6, 11 and 19 being independent. By this Amendment, Applicants have amended Claims 1, 2, 6, 7, 11, 17, 19 and 25, and canceled Claims 3, 8, 12, 16, 20 and 24, which were canceled in view of the changes to the independent claims.

Claims 11, 17, 19 and 25 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Applicants have amended those claims to attend to the matters set forth in the Office Action as giving rise to the rejection. Accordingly, Applicants request withdrawal of the rejection under 35 U.S.C. § 112, second paragraph.

Claims 1-3, 5-8 and 10 stand rejected under 35 U.S.C. § 102 as being anticipated by Japanese Document No. 10-10447 (Asami, et al.). Claims 4, 9, 11-13, 15-21 and 23-26 stand rejected under 35 U.S.C. § 103 over the Asami, et al. document in view of U.S. Patent No. 5,999,345 (Nakajima, et al.). Claims 14 and 22 stand rejected under 35 U.S.C. § 103 over the Asami, et al. document, the Nakajima, et al. patent, and Japanese Document No. 09-243944 (Asami'944). Applicants traverse these rejections.

As recited in independent Claim 1, Applicants' invention is directed to a multi-beam scanning apparatus that includes a multi-beam semiconductor laser, a laser holder, a multi-beam light source unit, scanning imaging means, and a housing. The laser holder holds the multi-beam semiconductor laser. The multi-beam light source unit includes the multi-

beam semiconductor laser, the laser holder, and a rectangular laser driving circuit board. The scanning imaging means scans a plurality of laser beams emitted by the multi-beam semiconductor laser to form an image on a surface to be scanned. The housing includes a sidewall with a longitudinal edge, and supports the scanning imaging means and the multi-beam light source unit. The multi-beam light source unit is fixed to the sidewall of the housing and a longitudinal edge of the rectangular laser driving circuit board is generally parallel with the longitudinal edge of the sidewall. The multi-beam semiconductor laser is fixed to the laser holder with an inclination at or near a predetermined rotational angle for adjusting a beam interval between the plurality of laser beams. A plurality of emission points of the multi-beam semiconductor laser are aligned along a line which is inclined with respect to the longitudinal edge of the sidewall.

As recited in independent Claim 6, Applicants' invention is directed to a multi-beam light source unit that includes a multi-beam semiconductor laser, a laser holder, and a multi-beam light source similar to those features as recited in Claim 1. The plurality of emission points of the multi-beam semiconductor laser are aligned along a line which is inclined with respect to the longitudinal edge of the rectangular laser driving circuit board.

As recited in independent Claim 11, Applicants' invention is directed to a multi-beam scanning apparatus that

includes a multi-beam semiconductor laser, a laser holder, a multi-beam light source unit, scanning imaging means, a housing, and fixing means. The laser holder holds the multi-beam semiconductor laser. The multi-beam light source unit includes the multi-beam semiconductor laser and the laser holder. The scanning imaging means scans a plurality of laser beams emitted by the multi-beam semiconductor laser to form an image on a surface to be scanned. The housing supports the scanning imaging means and the multi-beam light source unit. The fixing means fixes the multi-beam light source unit to the housing, and has a plurality of fixing portions. The plurality of fixing portions comprise at least three fixing portions. A center of rotation of the multi-beam light source unit and the plurality of emission points of the multi-beam semiconductor laser are located in a planar region defined by straight lines connecting the three fixing portions.

As recited in independent Claim 19, Applicants' invention is directed to a multi-beam light source unit that recites features similar to those of the scanning apparatus of Claim 11. However, Claim 19 does not recite scanning imaging means.

The Asami, et al. document is directed to a multi-beam light source unit that is provided with a holder fixed in an optical box. However, Applicants submit that this document does not describe the specific inclinations of

features in the claimed invention, which advantageously allow constructing a compact multi-beam scanning apparatus.

Accordingly, Applicants submit that the Asami, et al. document fails to disclose or suggest at least the features of a multi-beam light source unit being fixed to a sidewall of a housing and a longitudinal edge of a rectangular laser driving circuit board being generally parallel with the longitudinal edge of the sidewall, wherein a plurality of emission points of a multi-beam semiconductor laser are aligned along a line which is inclined with respect to the longitudinal edge of the sidewall, as disclosed in the application and recited in independent Claim 1. In addition, Applicants submit that the Asami, et al. document fails to disclose or suggest at least the features of a plurality of emission points of the multi-beam semiconductor laser being aligned along a line which is inclined with respect to a longitudinal edge of a rectangular laser driving circuit board, as disclosed in the application and recited in independent Claim 6.

The Nakajima, et al. patent is directed to a multi-beam light source unit including a plurality of semiconductor lasers. The Office Action states that this patent describes a light source unit whose emission points form a straight line with a center of rotation of a light source. However, Applicants submit that this patent does not suggest using three fixing portions, at least, arranged such that a center of rotation of a light source and emission points of a laser

are located in a planar region defined by those fixing portions.

The Asami, et al. document, discussed above, also does not describe three fixing portions being used such that a center of rotation of a light source and a plurality of emission points of a laser are located in a planar region defined by the fixing portions.

Accordingly, Applicants submit that the Asami, et al. document and the Nakajima, et al. patent, taken alone or in combination, fail to disclose or suggest at least the features of fixing means with a plurality of fixing portions, with a center of rotation of a multi-beam light source unit and a plurality of emission points of a multi-beam semiconductor laser being located in a planar region defined by straight lines connecting the at least three fixing portions, as disclosed in the application and recited in independent Claims 11 and 19.

The Asami '944 document is directed to a laser unit with a semiconductor laser source. The Office Action cites this patent as describing different ways of fixing a laser holder to a housing. Applicants submit that this document fails to remedy the deficiencies noted above with respect to the Asami, et al. document and the Nakajima, et al. patent.

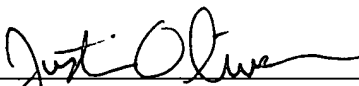
For the forgoing reasons, Applicants submit that the independent claims are distinguishable over the applied documents, whether those documents are taken alone or in combination, and requests that the rejections under 35 U.S.C.

§§ 102 and 103 be withdrawn. The remaining claims in the present application are dependent claims which depend from the independent claims discussed above, and are thus patentable over the documents of record for reasons noted above with respect to those independent claims. In addition, each recites features of the invention still further distinguishing it from the applied documents. Applicants request favorable and independent consideration thereof.

Applicants submit that all outstanding matters in the present application have been addressed and that this application is in condition for allowance.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,



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